

IN THE CLAIMS

Please amend the claims as follows (Exhibit I contains a marked up version).

1. (Amended) An optical pickup apparatus for recording or reproducing information on or from an optical disc, said apparatus comprising:

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a light source radiating a laser beam;
an optical detector detecting reflected light from the optical disc;

a collimator lens converting the radiated light of said light source into a fine divergent pencil of rays; and
an objective lens that focuses said rays on said optical disc, wherein

said collimator lens has a surface that is curved to form a wavefront shape that increasingly corrects a coma aberration of the radiated light in correspondence to a radial distance between a center of the collimator lens and a position at which said radiated light intersects said collimator lens.

2. (Amended) An optical pickup apparatus as claimed in claim 1, wherein a ratio of sine amount ($\sin \theta_2 / \sin \theta_1$) between a sine amount ($\sin \theta_1$) of the radiated light from said light source with respect to an optical axis and a sine amount ($\sin \theta_2$) of the

light after radiating through said collimator lens with respect to the optical axis increases in substantial proportion to a square of said radial distance.

3. (Amended) An optical pickup apparatus for recording or reproducing information on or from an optical disc, said apparatus comprising:

a first light source radiating a laser beam having a first wavelength;

a first detector detecting reflected light from the optical disc;

a second light source radiating a laser beam having a second wavelength longer than said first wavelength;

a second detector detecting reflected light from the optical disc;

a light separator introducing the laser beam having said first wavelength and the laser beam having said second wavelength to the substantially same optical axis;

an objective lens functioning so as to form a smaller spot from the laser beam having said first wavelength than from the laser beam having said second wavelength;

a first collimator lens converting the radiated light of said first light source into a substantially parallel beam; and

a second collimator lens converting the radiated light of said second light source into a fine divergent pencil of rays, wherein:

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said second collimator lens has a surface that is curved to form a wavefront shape that increasingly corrects a coma aberration of the radiated light of said second light source in correspondence to a radial distance between a center of said second collimator lens and a position at which the radiated light of said second light source intersects said second collimator lens.

4. (Amended) An optical pickup apparatus as claimed in claim 3, wherein a ratio of sine amount ($\sin \theta_2 / \sin \theta_1$) between a sine amount ($\sin \theta_1$) of the radiated light from said second light source with respect to the optical axis and a sine amount ($\sin \theta_2$) of the light after radiating through said second collimator lens with respect to the optical axis increases in substantial proportion to a square of said radial distance.

7. (Amended) An optical pickup apparatus for recording or reproducing information on or from an optical disc, said apparatus comprising:

a first light source radiating a laser beam having a first wavelength;

a first detector detecting reflected light from the optical disc;

a second light source radiating a laser beam having a second wavelength longer than said first wavelength;

a second detector detecting reflected light from the optical disc;

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a light separator introducing the laser beam having said first wavelength and the laser beam having said second wavelength to the substantially same optical axis;

an objective lens functioning so as to form a smaller spot from the laser beam having said first wavelength than from the laser beam having said second wavelength;

a first collimator lens converting the radiated light of said first light source into a substantially parallel beam; and

a second collimator lens converting the radiated light of said second light source into a fine divergent pencil of rays, wherein:

the radiated light of said second light source forms an optical path reaching said objective lens through said second collimator lens and said light separating means, and

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said second collimator lens has a surface that is curved to form a wavefront shape that increasingly corrects a coma aberration of the radiated light of said second light source in correspondence to a radial distance between a center of the second collimator lens and a position at which the radiated light of said second light source intersects said second collimator lens.

8. (Amended) An optical pickup apparatus as claimed in claim 7, wherein a ratio of sine amount ($\text{SIN } \theta_2/\text{SIN } \theta_1$) between a sine amount ($\text{SIN } \theta_1$) of the radiated light from said second light source with respect to the optical axis and a sine amount ($\text{SIN } \theta_2$) of the light after radiating through said second collimator lens with respect to the optical axis increases in substantial proportion to a square of said radial distance.

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11. (Amended) An optical pickup apparatus for recording or reproducing information on or from an optical disc, said apparatus comprising:

a first light source radiating a laser beam having a first wavelength,

a first detector detecting reflected light from the optical disc,

a second light source radiating a laser beam having a second wavelength longer than said first wavelength;

a second detector detecting reflected light from the optical disc;

a light separator introducing the laser beam having said first wavelength and the laser beam having said second wavelength to the substantially same optical axis;

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an objective lens functioning so as to form a smaller spot from the laser beam having said first wavelength than from the laser beam having said second wavelength;

a first collimator lens converting the radiated light of said first light source into a substantially parallel beam; and

a second collimator lens converting the radiated light of said second light source into a fine divergent pencil of rays, wherein:

the radiated light of said second light source forms an optical path reaching said objective lens through said second collimator lens, said light separating means and said first collimator lens, and

said second collimator lens has a surface that is curved to form a wavefront shape that increasingly corrects a coma aberration of the radiated light of said second light source in correspondenc to a radial distance between a center of the

second collimator lens and a position at which the radiated light of said second light source intersects said second collimator lens.

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12. (Amended) An optical pickup apparatus as claimed in claim 11, wherein a ratio of sine amount ($\text{SIN } \theta_3/\text{SIN } \theta_1$) between a sine amount ($\text{SIN } \theta_1$) of the radiated light from said second light source with respect to the optical axis and a sine amount ($\text{SIN } \theta_3$) of the radiated light from said second light source after radiating through said first collimator lens with respect to the optical axis increases in substantial proportion to a square of said radial distance.